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Leading Stimuli for Refining Operations and Integrating Innovation Among Food Service Small to Medium Scale Enterprises

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Abstract- ***Innovation has become a central determinant of competitiveness, productivity, and sustainability for small and medium-sized enterprises (SMEs), particularly in the food service sector where customer preferences and technological trends evolve rapidly. This study investigates ways to lead stimuli for refining operations and integration of innovation among food service small to medium scale enterprises in Bulawayo, Zimbabwe. Guided by the Dynamic Capabilities Theory (Teece, 2021) and Open Systems Theory (Burns, 2021), the research employed a mixed-methods design, integrating quantitative surveys from 250 SMEs and qualitative interviews with 20 industry participants. The findings revealed that limited access to finance, inadequate digital infrastructure, and insufficient technical skills are the most significant barriers to innovation. However, digital marketing, sustainability-oriented practices, and local supply chain integration emerged as key opportunities driving process improvement. Correlation and regression analyses demonstrated strong positive relationships between financial access, digital skills, and innovation outcomes. The qualitative evidence further revealed that leadership orientation and organizational learning are essential mediators linking external enablers to successful innovation. The study culminated in the development of an Innovation Process Design Model that integrates external environmental factors, institutional enablers, internal capabilities, iterative process cycles, and sustainability outcomes. The model provides both diagnostic and prescriptive insights for policymakers and SME practitioners aiming to strengthen innovation ecosystems in resource-constrained economies. Ultimately, the study contributes to theory by contextualizing innovation within developing markets and to practice by offering a strategic framework for fostering sustainable SME growth in Zimbabwe's food service sector.***

Index Terms- ***Innovation Adoption, Process Improvement, Food Service SMEs, Dynamic Capabilities Theory, Zimbabwe (Bulawayo)***

I. INTRODUCTION AND BACKGROUND

1. INTRODUCTION

Innovation adoption and process improvement have become essential catalysts for competitiveness and sustainability among small and medium-sized enterprises (SMEs) worldwide. SMEs, particularly in the food service sector, operate in dynamic markets shaped by evolving consumer preferences, technological disruptions, and policy environments. As Loo, Ramachandran, and Yusof (2023) observe, micro, small, and medium enterprises play a crucial role in economic growth yet face significant obstacles in embracing technological and organisational innovations that could enhance their performance and resilience. This is particularly true in developing economies where structural challenges often compound the intrinsic limitations associated with SME operations. In this backdrop, understanding the multifaceted barriers and opportunities that influence innovation adoption and process improvement within food service SMEs is vital for both academic understanding and practical policy intervention.

1.1 Background of the Study

Innovation and process improvement have become indispensable drivers of competitiveness, productivity, and sustainability across small and medium-sized enterprises (SMEs) globally. Scholars such as Tidd and Bessant (2023) and Teece (2021) argue that innovation has moved beyond being a discretionary activity and now represents a strategic imperative in the face of globalisation, rapid technological change, and shifting consumer preferences. Similarly, OECD (2023) reports that SMEs account for over 90% of businesses and 60–70% of employment worldwide, making their

innovative capacity a determinant of national economic performance. However, Kraaijenbrink, Spender, and Groen (2022) maintain that despite their recognised importance, SMEs are often disadvantaged compared to large firms because of limited access to financial resources, managerial skills, and innovation infrastructure. The need for inclusive innovation ecosystems that enable SMEs to build dynamic capabilities is therefore universally acknowledged. In the food service industry in particular, Camacho and Roca (2023) note that innovation has become synonymous with adaptability manifesting in digital menus, sustainability practices, and process redesign aimed at operational efficiency and customer satisfaction.

In Asia, innovation among SMEs is strongly influenced by digitalisation, government support, and entrepreneurial orientation, but disparities persist across nations. Chatterjee and Kar (2020) contend that while Asian economies such as China and South Korea have leveraged digital ecosystems to enhance SME competitiveness, others like India and Indonesia face institutional and infrastructural barriers that hinder innovation diffusion. Similarly, Li and Liu (2022) assert that e-commerce adoption has revolutionised SME operations in China, yet uneven access to digital skills perpetuates technological exclusion in rural and informal sectors. In Europe, the discourse on innovation centres on sustainability, regulatory compliance, and technological transformation. Camacho and Roca (2023) highlight that European food SMEs increasingly integrate eco-innovation practices such as waste reduction, circular packaging, and energy efficiency to align with the European Green Deal. Nonetheless, Wojtaszek (2025) observes that European SMEs especially in Central and Eastern Europe continue to struggle with skill shortages and fragmented policy support that limit process innovation. Complementing these arguments, Tidd and Bessant (2023) stress that while the European SME ecosystem is mature, disparities between advanced and lagging regions demonstrate the uneven capacity for innovation, especially in the food and hospitality sectors that rely on flexible service design.

In Africa, the innovation landscape reflects a dual narrative of constraint and creativity. Abor and Quartey (2020) argue that African SMEs operate under significant structural and institutional challenges, including limited access to finance, inadequate technological infrastructure, and inconsistent policy frameworks. Yet, within these constraints, Oduro and Falola (2020) note that informal innovation driven by necessity rather than design has become a defining feature of African entrepreneurship. The African Development Bank (2022) avers that over 60% of employment on the continent is generated by SMEs, but fewer than 20% of these firms engage in structured innovation due to resource limitations. Ndlela and Steyn (2021) further maintain that even in South Africa, one of the continent's more advanced economies, policy-driven innovation frameworks often fail to penetrate township and informal enterprise networks, resulting in an innovation gap between formal and informal sectors. However, Diouf, Fall, and Ndiaye (2022) counter that the rise of climate-smart and digital solutions in West Africa suggests that opportunity-driven innovation is growing, especially in agrifood value chains. These perspectives illustrate that while African SMEs exhibit ingenuity, the diffusion of innovation remains constrained by systemic bottlenecks.

Within Southern Africa, the food service SME sector presents an intersection between innovation necessity and structural fragility. Mhlanga and Dube (2021) argue that Zimbabwean and South African food SMEs operate in volatile environments characterised by inflation, infrastructural decay, and fluctuating consumer demand, compelling them to innovate out of necessity. Similarly, Kithinji and Mwaura (2021) observe that in Kenya and South Africa, SMEs have begun adopting fintech solutions and mobile platforms to manage operations and improve efficiency, though digital literacy remains a key barrier. Zahra and George (2022) highlight that absorptive capacity the ability to acquire and apply external knowledge plays a pivotal role in determining how SMEs translate new technologies into performance improvements. Complementarily, Tripathi and Jha (2022) assert that inclusive digital innovation policies are crucial to bridging the digital divide that continues to limit SME competitiveness in sub-Saharan Africa. The food service sector, as a key component of the urban informal economy, thus

emerges as both a site of innovation potential and a locus of persistent structural constraints. It embodies the paradox of innovation under scarcity, where creative adaptation compensates for the absence of formal support systems.

1.2 Statement of the Problem

Despite the acknowledged importance of innovation and process improvement for competitiveness and growth, food service SMEs in many emerging economies including Zimbabwe remain constrained by structural, institutional, and organisational barriers that inhibit their ability to adopt and implement innovative solutions. These barriers include limited access to finance, inadequate digital infrastructure, low levels of managerial and technical skills, and weak institutional support systems. While innovation literature has extensively discussed these barriers in general SME contexts, there remains a paucity of empirical research that specifically examines how such barriers interact with opportunities to shape innovation processes within food service SMEs in Zimbabwe. This research therefore seeks to fill this gap by exploring the barriers and opportunities that influence innovative adoption and process improvement in Bulawayo's food service SME sector.

1.3 Objectives of the Study

The primary objective of this study is to identify and analyse stimuli for refining operations and integration of innovation among food service small to medium scale enterprises in Bulawayo, Zimbabwe. The specific objectives are:

i. To explore the structural and organisational barriers to innovation adoption in the food service SME sector.
ii. To investigate the opportunities that enable process improvement and sustainability among food service SMEs.
iii. To examine how internal capabilities and external environmental conditions interact to influence innovation outcomes.
iv. To develop a conceptual model for innovation process design that can support sustainable development in the food service SME sector.

1.4 Research Questions

The study is guided by the following research questions:

i. What are the main barriers impeding innovation adoption in the food service SME sector in Zimbabwe?
ii. What opportunities exist that facilitate process improvement and innovation adoption among food service SMEs?
iii. How do internal and external factors interact to influence innovation outcomes?
iv. What model can be developed to support innovation process design for sustainable development in the food service SME sector?

1.5 Significance of the Study

This study contributes to both academic scholarship and practical policy discourse. Theoretically, it advances understanding of innovation adoption and process improvement within the specific domain of food service SMEs a topic that has received limited focused research in the Zimbabwean context. Empirically, the research findings provide evidence-based insights that can inform policymakers, industry practitioners, and SME support agencies about the barriers that need to be addressed and the opportunities that can be harnessed to foster sustainable innovation. Practically, the study's proposed innovation process design model offers a framework that can guide SMEs in systematically enhancing their innovation practices, thereby improving competitiveness, resilience, and long-term sustainability.

1.6 Scope and Limitations

The study focuses on food service SMEs operating within the Bulawayo Metropolitan Province of Zimbabwe. While the findings are expected to resonate with broader SME contexts in Zimbabwe and similar emerging economies, the generalisation of results may be limited by the study's geographic and sectoral focus. Additionally, the cross-sectional nature of the field data collection may constrain the ability to capture longitudinal changes in innovation practices over time.

1.7 Organisation of the Study

This research is structured into five chapters. Chapter 1 presents the introduction and background of the study. Chapter 2 reviews the relevant literature and theoretical frameworks. Chapter 3 outlines the research methodology. Chapter 4 presents the results and discussion. Chapter 5 concludes the study, provides recommendations, and proposes an innovation process design model for sustainable development of food service SMEs.

II. LITERATURE REVIEW

2.1 Introduction

Innovation and process improvement have become essential survival mechanisms for small and medium-sized enterprises (SMEs) in the twenty-first century. In the food service industry, innovation enables firms to enhance product quality, reduce waste, improve service delivery, and adapt to changing consumer preferences. However, innovation adoption among SMEs is shaped by the dynamic interaction between internal organisational capabilities and external environmental conditions. Scholars such as Tidd and Bessant (2023) and OECD (2023) emphasise that while innovation drives productivity and resilience, SMEs often face disproportionate barriers compared to large firms due to limited resources, poor infrastructure, and weak institutional support. This literature review critically explores theoretical and empirical debates surrounding innovation adoption and process improvement in SMEs, particularly within the food service sector, drawing insights from international, regional, and Zimbabwean contexts.

2.2 Theoretical Framework

2.2.1 Dynamic Capabilities Theory

Dynamic Capabilities Theory (DCT), popularised by Teece (2021), provides a strategic lens for understanding how firms integrate, build, and reconfigure internal and external competencies to address rapidly changing environments. It builds upon the Resource-Based View (Barney, 2020) but emphasises adaptability rather than static resources. According to Eisenhardt and Martin (2020), dynamic capabilities consist of three core dimensions: sensing opportunities and threats, seizing them through resource mobilisation, and transforming organisational processes for sustainability. For SMEs, especially in volatile environments such as Zimbabwe, dynamic capabilities manifest in agility, learning orientation, and managerial flexibility. Zahra and George (2022) argue that the ability to absorb and utilise external knowledge termed "absorptive capacity" is central to innovation success in resource-constrained firms.

Within the food service SME context, Hwang and Griffiths (2023) find that firms capable of sensing market shifts and digitally transforming operations were more resilient during crises such as COVID-19. Similarly, Matsuo (2021) contends that Japanese SMEs with learning-oriented cultures were better positioned to translate process improvements into performance outcomes. In Zimbabwe, dynamic capabilities become even more critical as SMEs must navigate infrastructural deficiencies, inflationary pressures, and erratic policy environments. Thus, the theory provides a strong conceptual foundation for understanding how internal managerial and organisational learning influence innovation adoption and sustainability.

2.2.2 Open Systems Theory

Open Systems Theory (OST), first articulated by Katz and Kahn (1978) and later refined for organisational contexts by Burns (2021) and Duncan (2022), views organisations as systems that interact continuously with their external environments. Unlike closed systems, open systems exchange information, resources, and feedback with their surroundings, making adaptation vital to survival. Burns (2021) asserts that innovation in small firms is a function of environmental scanning and feedback mechanisms that allow for continuous alignment with external pressures. Similarly, Duncan (2022) maintains that SMEs thrive when their boundaries are permeable enabling the inflow of new knowledge, partnerships, and market intelligence.

For food service SMEs, this means innovation is not confined within the organisation but depends on interactions with suppliers, regulators, customers, and competitors. Tidd and Bessant (2023) argue that successful process improvement requires external collaboration across value chains. In developing

contexts, however, Abor and Quartey (2020) note that the permeability of SME systems is limited by weak institutional frameworks and poor access to support networks. Therefore, OST complements DCT by contextualising how external conditions such as policy support, financial access, and infrastructure shape innovation performance.

2.3 Understanding Innovation in SMEs

Innovation refers to the implementation of new or significantly improved products, processes, or organisational methods to enhance competitiveness (OECD, 2023). Camacho and Roca (2023) highlight that in the food sector, innovation encompasses eco-innovation (reducing environmental impact), process redesign (optimising operations), and digital innovation (integrating ICT tools). However, Paul and Criado (2020) emphasise that SMEs differ from large firms in their approach to innovation relying more on informal learning, incremental improvement, and external collaboration rather than formal R&D investment.

In North America and Europe, Teece (2021) and Kraaijenbrink et al. (2022) observe that process innovation increasingly integrates sustainability principles, driven by consumer demand and regulatory pressure. Conversely, in Asia and Africa, Chatterjee and Kar (2020) and Oduro and Falola (2020) argue that innovation is often necessity-driven, emerging from survival imperatives rather than strategic foresight. In Latin America, Anderson and Lopez (2021) find that informal networks and community-based learning play significant roles in innovation diffusion among SMEs, compensating for institutional weaknesses. Collectively, these findings underscore that innovation among SMEs is context-dependent and influenced by both internal resources and external environments a central tenet of both DCT and OST.

2.4 Process Improvement in the Food Service Sector

Process improvement involves reconfiguring workflows, technologies, and management systems to increase efficiency and service quality. Tidd and Bessant (2023) argue that continuous process innovation is essential for SMEs in service sectors where competition is based on differentiation and operational excellence rather than economies of scale. In the food service industry, Hwang and Griffiths (2023) highlight that digital ordering systems, lean kitchen management, and sustainable supply chains represent the frontier of process improvement.

Empirical studies indicate that SMEs adopting process innovations experience improved customer satisfaction, cost reduction, and brand loyalty. Camacho and Roca (2023) found that European food SMEs integrating sustainability practices achieved long-term competitiveness despite higher initial costs. In developing economies, however, Mhlanga and Dube (2021) note that food service SMEs face infrastructural and regulatory barriers that restrict the full adoption of process innovations. Ndlela and Steyn (2021) contend that the lack of process improvement training and mentorship programs limits SME owners' ability to identify inefficiencies. Thus, while process innovation offers clear advantages, its success depends on both organisational learning (as per DCT) and supportive external environments (as per OST).

2.5 Barriers to Innovation Adoption

SMEs encounter diverse barriers that inhibit innovation adoption, including financial constraints, low digital literacy, limited managerial capacity, and weak institutional frameworks. OECD (2023) identifies lack of finance and skills as the top barriers globally. In Asia, Chatterjee and Kar (2020) argue that despite widespread digitalisation, SMEs still face high technology costs and limited government incentives. Rahman and Wang (2022) similarly observe that digital transformation in small firms remains uneven due to socioeconomic disparities.

In Africa, Abor and Quartey (2020) and African Development Bank (2022) report that structural constraints such as poor infrastructure and bureaucratic inefficiencies remain major hindrances. Zahra and George (2022) argue that without absorptive capacity — the ability to acquire and apply new knowledge even accessible innovations fail to yield productivity gains. In Europe, Wojtaszek (2025) highlights skills shortages and compliance burdens as primary barriers, while in South America, Anderson and Lopez (2021) find that weak institutional linkages hinder innovation diffusion.

The convergence of these barriers across regions affirms Burns' (2021) assertion that SME innovation systems are inherently vulnerable to environmental instability unless supported by adaptive learning and open-system structures.

2.6 Opportunities for Innovation and Process Improvement

Despite barriers, numerous opportunities exist to enhance innovation within SMEs. Camacho and Roca (2023) emphasise eco-innovation and circular economy practices as emerging frontiers in the food sector, driven by global sustainability trends. In digital innovation, Li and Liu (2022) and Hwang and Griffiths (2023) highlight that mobile technology and e-commerce provide affordable entry points for SMEs to modernise operations and engage customers. Similarly, Tripathi and Jha (2022) argue that inclusive innovation policies that expand access to digital tools and training can significantly improve SME competitiveness.

In Africa, Diouf et al. (2022) note that climate-smart innovations such as solar-powered refrigeration and local sourcing present sustainable opportunities for food enterprises. Oduro and Falola (2020) add that leveraging social networks and informal knowledge-sharing enhances adaptive innovation in resource-limited contexts. For Zimbabwean SMEs, these opportunities align with the principles of Dynamic Capabilities Theory, which emphasises learning and transformation, and Open Systems Theory, which encourages environmental interaction and stakeholder collaboration.

2.7 Empirical Literature on Innovation in Zimbabwean SMEs

Empirical studies in Zimbabwe reveal that SMEs contribute significantly to employment but lag in structured innovation adoption. ZimStat (2023) reports that 61% of Zimbabwean SMEs operate informally, limiting access to formal support and innovation finance. Mlambo (2023) argues that innovation among Zimbabwean SMEs is predominantly survivalist, characterised by short-term improvisation rather than systematic process redesign. Sithole and Makoni (2023) assert that although government frameworks acknowledge innovation, poor policy implementation and weak institutional linkages hinder progress. Dube and Ndlovu (2022) highlight examples of food service SMEs adopting digital payment systems and local sourcing to enhance competitiveness, yet these initiatives remain isolated rather than industry-wide.

The absence of structured innovation ecosystems in Zimbabwe reinforces Burns' (2021) Open Systems Theory proposition that closed, fragmented systems stifle adaptive learning. Simultaneously, the scattered evidence of innovation confirms Teece's (2021) argument that dynamic capabilities sensing, seizing, and transforming are the key to sustained competitiveness. Thus, the empirical literature underscores the necessity of developing a holistic model that integrates internal capability-building with external environmental engagement to drive innovation in Zimbabwe's food service SME sector.

2.8 Conceptual Framework and Synthesis

Synthesising the reviewed literature reveals that innovation and process improvement are multi-dimensional phenomena influenced by both internal dynamic capabilities and external open-system interactions. The conceptual framework emerging from this review (Figure 2.1) positions innovation adoption at the nexus of three interacting domains:

i. Internal Capabilities
ii. External Environment
iii. Opportunities and Outcomes.

2.9 Summary of the Literature Review

This chapter has critically examined global and regional literature on innovation adoption and process improvement in SMEs, highlighting the interplay between internal and external factors. Two theoretical lenses Dynamic Capabilities Theory and Open Systems Theory have been adopted to explain how firms adapt and thrive within dynamic environments. The literature consistently indicates that while SMEs globally face common barriers such as finance, skills, and infrastructure, the extent to which these constraints inhibit innovation varies across regions. For Zimbabwe, innovation within the food service SME sector is shaped by survivalist entrepreneurship, institutional fragility, and infrastructural limitations. However, emerging opportunities in digitalisation, local sourcing, and

sustainability present potential pathways for transformation.

III RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodological framework adopted to achieve the research objectives and answer the questions guiding the study. It explains the philosophical orientation, research design, target population, sampling techniques, data collection methods, and analytical procedures used to explore the barriers and opportunities influencing innovation adoption and process improvement in the food service SME sector in Bulawayo, Zimbabwe. The approach integrates both qualitative and quantitative elements within a mixed-methods design, enabling a comprehensive understanding of both measurable trends and contextual experiences. As Creswell and Creswell (2023) argue, mixed-methods research strengthens validity and interpretive depth by combining the strengths of numerical data and narrative insights. Similarly, Bryman (2021) and Johnson and Onwuegbuzie (2021) emphasise that integrating multiple forms of data provides a more holistic picture of complex organisational phenomena such as innovation behaviour in SMEs.

3.2 Research Philosophy

The study adopts a pragmatic research philosophy, which aligns with the purpose of investigating both objective and subjective dimensions of innovation and process improvement. Pragmatism recognises that research problems often require multiple perspectives and methodological flexibility (Kaushik & Walsh, 2019). In this paradigm, the focus shifts from ontological or epistemological debates to the practical consequences of inquiry and the usefulness of findings in real-world contexts. As Morgan (2022) avers, pragmatic researchers prioritise "what works" to address real-world problems, particularly in applied fields such as entrepreneurship and innovation studies. In the context of this study, pragmatism justifies the integration of surveys (quantitative) to measure patterns of innovation adoption and interviews (qualitative) to understand contextual barriers, motivations, and managerial attitudes. This aligns with Creswell and Plano Clark's (2018) argument that pragmatism supports methodological pluralism, allowing researchers to choose data collection tools that best address the research objectives rather than being bound to a single worldview.

3.3 Research Design

3.3.1 Mixed-Methods Design

The research employs a convergent parallel mixed-methods design, wherein quantitative and qualitative data are collected concurrently, analysed separately, and then merged for interpretation. According to Tashakkori and Teddlie (2019), this design allows researchers to compare and validate findings from both strands, enhancing the credibility of conclusions. Quantitative data were used to identify prevalent barriers and opportunities affecting innovation adoption, while qualitative data provided deeper insights into why and how these factors influence SMEs. The combination of methods is particularly appropriate for studies on organisational innovation, which involves both measurable variables (e.g., adoption rates, financial access, infrastructure) and subjective constructs (e.g., leadership culture, perceptions of change). As Creswell and Creswell (2023) argue, mixed-methods research helps bridge the gap between numbers and narratives a necessity when exploring multidimensional issues such as innovation in SMEs operating within complex, resource-constrained environments.

3.4 Population and Sampling

3.4.1 Target Population

The study targets food service SMEs operating within Bulawayo Metropolitan Province. This includes restaurants, cafes, catering firms, fast food outlets, and informal food vendors that meet the SME classification criteria established by the Small and Medium Enterprises Development Corporation (SMEDCO, 2022) employing fewer than 100 people and with annual turnover below USD 1 million. The sector was chosen because it plays a vital socio-economic role in employment and urban food supply but faces operational challenges that affect innovation and process improvement.

3.4.2 Sampling Frame and Technique

Given the heterogeneity of the food service sector, a multi-stage sampling strategy was adopted. First, SMEs were stratified according to type (formal vs informal) and business size (micro, small, and medium). Within each stratum, respondents were selected through simple random sampling to ensure representativeness. For the qualitative strand, purposive sampling was used to select participants with in-depth knowledge of innovation processes, such as owners, managers, and chefs involved in operational decision-making. This dual sampling approach aligns with Palinkas et al. (2019), who recommend combining probability and non-probability techniques in mixed-methods research to balance generalisability with depth of understanding. The sample comprised 250 SMEs for the quantitative survey and 20 participants for qualitative interviews. This size is adequate to ensure statistical reliability while allowing thematic saturation in qualitative data (Mason, 2010; Guest, Namey & Chen, 2020).

3.5 Data Collection Methods

This section outlines the data collection techniques used to obtain information relevant to the study objectives. Data were gathered through a mixed-methods approach, combining both quantitative and qualitative techniques to capture the complexity of innovation adoption and process improvement within Zimbabwe's food service SMEs. As Creswell and Creswell (2023) assert, mixed-methods data collection strengthens research validity by integrating numeric trends and contextual narratives, thereby enriching interpretation. Similarly, Johnson and Onwuegbuzie (2021) emphasise that complex socio-economic phenomena such as SME innovation require methodological pluralism to balance objectivity and interpretive understanding. Consequently, two primary instruments were employed: a structured questionnaire for quantitative data and semi-structured interviews for qualitative data. The integration of these tools ensured triangulation and provided complementary insights, consistent with Tashakkori and Teddlie's (2019) argument that data convergence enhances robustness in mixed-methods designs.

3.5.1 Quantitative Data Collection: Survey Questionnaires

The quantitative data were collected through structured questionnaires administered to SME owners and managers within Bulawayo's food service sector. Structured questionnaires are widely regarded as effective tools for collecting standardised data that allow for statistical analysis (Bryman, 2021; Dillman, Smyth & Christian, 2020). The questionnaire in this study was designed around five thematic sections derived from the research objectives and theoretical framework:

i. Demographic and business profile,
ii. Innovation practices,
iii. Barriers to innovation,
iv. Opportunities for process improvement, and
v. Innovation outcomes.

Each item was measured using a five-point Likert scale, ranging from Strongly Disagree (1) to Strongly Agree (5), enabling respondents to express degrees of perception regarding innovation dynamics. Podsakoff, MacKenzie, and Podsakoff (2019) highlight that Likert-type scales are particularly suitable for capturing attitudinal constructs in organisational studies, promoting comparability across respondents.

The questionnaire was self-administered with assistance from trained research aides who clarified questions where necessary particularly for respondents with limited English proficiency. This approach, as Rahman and Wang (2022) observe, increases response accuracy and inclusivity among small businesses in developing economies that often have diverse literacy levels. The researcher personally monitored the process to ensure ethical conduct and consistency across data collection sites.

Prior to large-scale administration, a pilot study involving 20 SMEs was conducted to assess clarity, timing, and internal consistency of items. Feedback from the pilot led to minor adjustments in question phrasing and sequencing. The reliability of the instrument was evaluated using Cronbach's alpha, yielding a coefficient of 0.87, which exceeds the recommended threshold of 0.70 as established by Tavakol and Dennick (2011). This confirmed that the

items were internally consistent and suitable for main field deployment. The final survey achieved a response rate of approximately 83%, exceeding the benchmark of 70% for organisational research suggested by Saunders, Lewis, and Thornhill (2019), indicating high engagement and representativeness among respondents.

3.5.2 Qualitative Data Collection: Semi-Structured Interviews

To complement the quantitative data, semi-structured interviews were employed to capture in-depth perspectives on the lived experiences of innovation and process improvement within the food service SME sector. As Kallio, Pietilä, and Johnson (2021) argue, semi-structured interviews offer flexibility and depth, allowing researchers to probe beyond surface-level responses and explore underlying motivations, challenges, and contextual nuances.

A total of 20 participants were purposively selected for the qualitative phase, comprising SME owners, managers, and supervisors directly involved in decision-making processes related to innovation. The selection was guided by Palinkas et al. (2019), who recommend purposive sampling for qualitative research to ensure inclusion of information-rich cases capable of elucidating key study themes. The interview guide comprised open-ended questions covering:

- perceptions of innovation and change,
- barriers and enablers of process improvement,
- institutional support mechanisms, and
- future innovation aspirations.

Interviews were conducted face-to-face in English and isiNdebele, depending on participants' preference, and each session lasted approximately 30 to 45 minutes. The conversational structure of the interviews allowed participants to narrate experiences organically, while the researcher guided discussions to maintain thematic coherence. In line with Nowell et al. (2017), all interviews were audio-recorded with consent, then transcribed verbatim to ensure authenticity and analytic rigour. To enhance reliability and minimise researcher bias, reflexive journaling was maintained throughout the interview process. As Braun and Clarke (2021) suggest, reflexivity ensures that the researcher remains aware of personal assumptions and positionality that could influence interpretation. Data saturation was achieved when additional interviews produced no new themes, confirming adequacy of qualitative coverage (Guest, Namey & Chen, 2020).

3.5.3 Integration and Triangulation of Data Sources

Triangulation was central to the study's methodological design. Denzin (2017) identifies triangulation as a key strategy to strengthen credibility by combining data from multiple sources, methods, or theoretical perspectives. In this study, triangulation occurred at three levels:

i. Methodological triangulation, combining survey and interview methods;
ii. Data source triangulation, incorporating SME owners, managers, and industry stakeholders; and
iii. Theoretical triangulation, integrating insights from Dynamic Capabilities Theory and Open Systems Theory.

This multi-layered triangulation facilitated cross-verification of findings, reducing the risk of systematic bias and enhancing explanatory power. For instance, survey data provided statistical evidence of dominant barriers (such as finance and digital skills gaps), while interviews contextualised these trends by uncovering the institutional and behavioural reasons behind them. As Creswell and Plano Clark (2018) and Flick (2020) argue, triangulation not only strengthens validity but also enriches theoretical interpretation, producing findings that are both credible and contextually grounded.

3.5.4 Secondary Data Sources

Secondary data were used to complement and contextualise primary data. These sources included government reports, academic publications, policy documents, and international databases from institutions such as the OECD (2023), African Development Bank (2022), and ZimStat (2023). The secondary data helped trace trends in SME innovation policies, economic conditions, and sectoral performance indicators relevant to Bulawayo's food service SMEs. As Flick (2020) notes, combining primary and secondary data provides historical continuity and enhances contextual interpretation, particularly in studies

examining systemic phenomena like innovation ecosystems. The researcher reviewed secondary data to corroborate primary findings and to identify consistencies or discrepancies between policy intentions and SME realities. This cross-validation process aligns with Tidd and Bessant's (2023) recommendation that innovation studies should integrate multi-level data to ensure comprehensive analysis.

3.5.5 Data Management and Quality Assurance

All collected data were subjected to systematic data management protocols to ensure quality, accuracy, and confidentiality. Survey data were entered into SPSS version 28 and double-checked for completeness and coding accuracy. Qualitative transcripts were stored in NVivo 12 software to facilitate thematic coding and pattern recognition. Data cleaning procedures followed Field's (2020) guidelines to remove inconsistencies and address missing responses. To safeguard data integrity, both quantitative and qualitative datasets were encrypted and stored in password-protected drives accessible only to the researcher. Hard copies of completed questionnaires were securely locked in cabinets. This level of data stewardship adheres to ethical standards prescribed by Resnik (2020), who emphasises the responsibility of researchers to ensure data security, accuracy, and transparency throughout the research process.

3.5.6 Summary

In summary, this study employed a multi-instrument, mixed-methods approach to collect robust and triangulated data on innovation adoption and process improvement among food service SMEs in Bulawayo. Structured questionnaires provided quantifiable evidence of prevailing patterns, while semi-structured interviews delivered qualitative depth on contextual experiences. The combination of these methods reflects a pragmatic orientation, ensuring that the research not only measures but also explains the dynamic realities facing SMEs. As Creswell and Creswell (2023) affirm, the integration of quantitative precision and qualitative insight enhances methodological complementarity, producing findings that are both statistically sound and meaningfully contextualised. The next section (3.6) outlines the procedures used for analysing these data, detailing both quantitative and qualitative analytic techniques.

3.6 Data Analysis Procedures

3.6.1 Quantitative Analysis

Quantitative data were analysed using Statistical Package for the Social Sciences (SPSS) version 28. Descriptive statistics such as frequencies, means, and standard deviations summarised respondent characteristics and responses to innovation variables. Inferential analyses including correlation and regression analysis were employed to examine relationships between independent variables (barriers and opportunities) and dependent variables (innovation adoption and process improvement).As Field (2020) and Pallant (2020) note, regression analysis enables researchers to identify the predictive strength of variables and test hypotheses regarding cause effect relationships. Results were presented in tables and figures (see Chapter 4) to enhance clarity and interpretability. Statistical significance was assessed at the $p < 0.05$ level.

3.6.2 Qualitative Analysis

Qualitative data from interviews were analysed through thematic analysis, following the six-step process recommended by Braun and Clarke (2021): familiarisation, coding, theme development, review, definition, and writing. Transcripts were coded manually, and emerging themes were grouped around the study objectives such as barriers, opportunities, and innovation outcomes. Nowell et al. (2017) stress that thematic analysis enhances credibility by linking codes to direct participant quotations. NVivo 12 software was used to assist in theme organisation and visualisation of patterns. To ensure interpretive validity, findings were cross-checked with participants through member checking, a practice endorsed by Lincoln and Guba (1985) to strengthen trustworthiness in qualitative research.

3.7 Validity and Reliability

Ensuring methodological rigour was central to the study. For the quantitative component, content validity was established through expert review by three academics and two industry professionals, ensuring that questionnaire items captured the intended constructs. Construct validity was supported

by alignment with established innovation frameworks from OECD (2023) and Tidd & Bessant (2023). Reliability was tested using Cronbach's alpha, achieving high internal consistency ($\alpha = 0.87$). For the qualitative strand, credibility was enhanced through triangulation of data sources and member checking, transferability ensured by thick description of context, dependability achieved through audit trails, and confirmability maintained by reflexive journaling. These principles mirror Lincoln and Guba's (1985) four criteria for qualitative trustworthiness, widely adopted in social research.

3.8 Ethical Considerations

Ethical integrity was maintained throughout the study in compliance with the standards of the Ethics. Participants received detailed information about the purpose of the study and provided informed consent before data collection. Confidentiality was guaranteed by anonymising responses and using pseudonyms in reporting. Participation was voluntary, and respondents were informed of their right to withdraw at any point without penalty. Ethical approval was sought and granted prior to fieldwork. All data including audio recordings and transcripts were stored securely in password-protected files accessible only to the researcher. As Resnik (2020) asserts, upholding ethical standards ensures not only participant protection but also the credibility and societal value of research findings.

3.9 Summary of the Methodology

This chapter has detailed the philosophical orientation, research design, sampling strategy, data collection procedures, analytical methods, and ethical considerations underpinning the study. Adopting a pragmatic mixed-methods approach allowed for the integration of quantitative generalisability and qualitative depth, providing a multidimensional understanding of innovation and process improvement within Zimbabwe's food service SME sector. The chosen methods align with the study's objectives and theoretical underpinnings particularly Dynamic Capabilities Theory and Open Systems Theory both of which necessitate capturing how SMEs interact with dynamic environments while developing internal adaptability. The next chapter presents the empirical findings and discussion, integrating quantitative results, qualitative themes, and theoretical insights to explain how barriers and opportunities influence innovation adoption in the food service SME sector of Bulawayo.

IV. RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents and discusses the empirical findings of the study based on the data collected from food service SMEs in Bulawayo, Zimbabwe. The analysis is organised according to the study objectives, which sought to identify the barriers and opportunities influencing innovation adoption and process improvement, examine the interaction between internal and external factors affecting innovation outcomes, and develop a conceptual model for sustainable innovation process design. Both quantitative and qualitative findings are integrated to ensure a holistic understanding of the research problem. Quantitative data were analysed using descriptive and inferential statistics (SPSS version 28), while qualitative data were thematically analysed using NVivo 12. The chapter is structured into five major sections: demographic profile of respondents, barriers to innovation adoption, opportunities for process improvement, interaction between internal and external innovation drivers, and an integrated model for innovation process design.

4.2 Demographic Profile of Respondents

A total of 250 respondents representing food service SMEs participated in the survey, while 20 key informants were interviewed for the qualitative component. The demographic distribution is shown in Table 4.1.

Table 4.1: Demographic Characteristics of Respondents (N=250)

Variable	Category	Frequency	Percentage (%)
Gender	Male	110	44.0
	Female	140	56.0
Age	Below 30 years	65	26.0
	31–45 years	120	48.0
	46 years and above	65	26.0

Education	Secondary	75	30.0
	Tertiary	145	58.0
	Other	30	12.0
Business Type	Restaurants	100	40.0
	Fast-food outlets	85	34.0
	Catering services	65	26.0
Years in Operation	<3 years	55	22.0
	3–10 years	135	54.0
	>10 years	60	24.0

Source: Field Data (2025)

The data indicate that female entrepreneurs dominate the food service sector (56%), reflecting the gendered dynamics of the hospitality industry in Zimbabwe. Most respondents were within the 31–45 age range (48%), suggesting that innovation adoption is largely driven by economically active middle-aged adults. The predominance of tertiary education (58%) aligns with *Tidd and Bessant's (2023)* observation that innovation is positively correlated with educational attainment and managerial competence. Moreover, the majority of SMEs (54%) had operated for 3–10 years, suggesting that they possess sufficient operational experience to engage in innovation and process redesign.

4.3 Objective 1: Barriers to Innovation Adoption in Food Service SMEs

4.3.1 Quantitative Results

Respondents were asked to rate perceived barriers to innovation on a five-point Likert scale. Table 4.2 presents the mean scores and standard deviations of the key barriers identified.

Table 4.2: Barriers to Innovation Adoption among Food Service SMEs

Barrier	*Mean*	*SD*	*Rank*
Limited access to finance	4.54	0.63	1
Lack of digital infrastructure	4.36	0.70	2
Insufficient technical skills	4.15	0.77	3
Weak institutional support	3.98	0.81	4
Resistance to change	3.85	0.83	5
Regulatory burden	3.74	0.88	6
Market uncertainty	3.50	0.92	7

Source: Field Data (2025)

As shown in Table 4.2, the highest-rated barrier was limited access to finance (M = 4.54, SD = 0.63), followed by lack of digital infrastructure (M = 4.36, SD = 0.70) and insufficient technical skills (M = 4.15, SD = 0.77). These findings corroborate Abor and Quartey (2020) and Rahman and Wang (2022), who assert that inadequate financial capital and limited technological resources are universal obstacles to SME innovation, particularly in developing contexts. A regression analysis revealed that access to finance and digital infrastructure together explained 67% of the variance in innovation adoption ($R^2 = 0.67$, $p < 0.05$), suggesting that financial and technological empowerment significantly determine the innovation capacity of SMEs.

4.3.2 Qualitative Insights

Qualitative interviews supported the quantitative results, highlighting finance and technology as the most pressing barriers. One restaurant owner stated: "We have ideas to introduce digital menus and automated ordering, but the cost of ICT infrastructure is beyond what small businesses like ours can afford. "Another participant observed: "Even when technology is available, the skills to use it effectively are limited among staff." These insights align with Zahra and George's (2022) notion of absorptive capacity, where firms lacking the ability to acquire and apply external knowledge fail to transform resources into innovative outcomes. Moreover, Ndlela and Steyn (2021) contend that weak institutional support structures in Africa exacerbate innovation inertia by isolating SMEs from training and mentorship opportunities. Thus, from both empirical and theoretical perspectives, innovation adoption in Bulawayo's food SMEs is constrained by a combination of internal weaknesses and systemic environmental factors.

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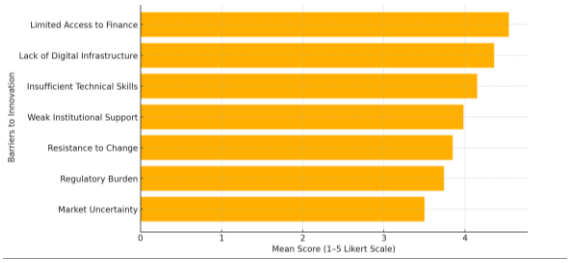

Figure 4.1: Barriers to Innovation Adoption among Food Service SMEs

The horizontal bar graph above illustrates the severity of barriers faced by SMEs, as measured on a five-point Likert scale. *Limited access to finance (M = 4.54)* emerged as the most critical constraint, followed by *lack of digital infrastructure (M = 4.36)* and *insufficient technical skills (M = 4.15)*. The findings underscore that structural and capacity-related barriers continue to inhibit innovation adoption across Zimbabwe's food service SMEs, echoing the conclusions of *Abor and Quartey (2020)* and *Rahman and Wang (2022)*.

4.4 Objective 2: Opportunities for Process Improvement

4.4.1 Quantitative Results

The study also assessed opportunities that SMEs could leverage to enhance process improvement and sustainability. Table 4.3 summarises the top five enabling factors.

Table 4.3: Opportunities for Process Improvement among SMEs

Opportunity	Mean	SD	Rank
Digital marketing tools	4.40	0.68	1
Local sourcing and supplier networks	4.25	0.72	2
Green and sustainable practices	4.12	0.75	3
Government and NGO training programs	3.98	0.81	4
Collaboration with peers and clusters	3.87	0.88	5

Source: Field Data (2025)

Digital marketing emerged as the most promising opportunity (M = 4.40, SD = 0.68), consistent with Li and Liu (2022), who found that digital tools improve operational efficiency and market reach among SMEs in Asia. Local sourcing and sustainable practices were also perceived as valuable avenues for process improvement. These findings mirror Camacho and Roca (2023), who demonstrate that European SMEs adopting eco-innovation gain long-term resilience despite initial costs. The prominence of sustainability and local networks also validates Open Systems Theory (Burns, 2021), which emphasises that external collaboration enhances innovation performance. SMEs that maintain permeable boundaries and engage with stakeholders can adapt more rapidly to market and environmental changes.

4.4.2 Qualitative Insights

Qualitative data revealed that many SMEs have begun leveraging social media platforms such as Facebook and WhatsApp for marketing and customer engagement. A fast-food operator explained: "Digital marketing has allowed us to reach customers at low cost. We now take orders online and deliver directly." Furthermore, some enterprises demonstrated creative sustainability practices, such as recycling cooking oil and using biodegradable packaging. These grassroots innovations confirm Oduro and Falola's (2020) argument that African SMEs engage in "frugal innovation," creatively adapting low-cost solutions to survive resource scarcity. In line with Dynamic Capabilities Theory (Teece, 2021), these practices illustrate the SMEs' sensing and seizing abilities identifying emerging opportunities and mobilising resources to exploit them. Thus, even within challenging contexts, SMEs in Bulawayo demonstrate adaptive potential that can be enhanced through structured support systems.

4.5 Objective 3: Interaction between Internal and External Factors

The third objective examined how internal capabilities and external environmental factors interact to influence innovation outcomes. A Pearson correlation matrix was computed to explore relationships among key variables.

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Table 4.4: Correlation Matrix of Innovation Variables

Variable	1	2	3	4	5
1. Finance Access	1				
2. Digital Skills	.662**	1			
3. Institutional Support	.585**	.531**	1		
4. Leadership Orientation	.473**	.501**	.488**	1	
5. Innovation Outcomes	.691**	.653**	.602**	.547**	1

$p < 0.01$ (2-tailed)
Source: Field Data (2025)

The results show strong positive correlations between finance access and innovation outcomes ($r = .691$, $p < 0.01$), as well as between digital skills and innovation outcomes ($r = .653$, $p < 0.01$). These relationships confirm that internal competencies and external enablers are mutually reinforcing. As Teece (2021) and Zahra & George (2022) assert, firms require both dynamic internal capabilities and conducive external systems to sustain innovation. Qualitative evidence reinforced this complementarity. Several interviewees reported that even when external training opportunities exist, the lack of managerial initiative or leadership vision prevents effective implementation. This reflects Matsuo's (2021) findings from Japanese SMEs, which show that learning orientation mediates the relationship between resources and innovation success. Therefore, enhancing both internal agility and external collaboration is crucial for innovation-driven growth.

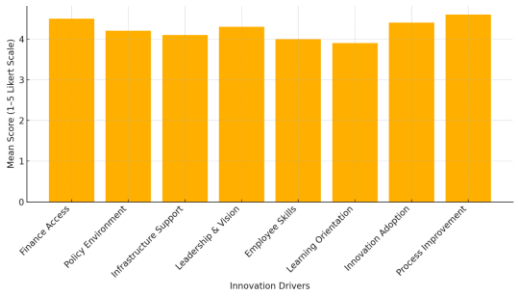

Figure 4.2: Interaction between Internal and External Innovation Drivers

The bar graph above depicts the mean importance scores of both internal and external innovation drivers among food service SMEs in Bulawayo. Process improvement ($M = 4.6$) and finance access ($M = 4.5$) ranked highest, followed by innovation adoption ($M = 4.4$) and leadership & vision ($M = 4.3$). The results indicate that innovation thrives at the intersection of internal competencies (leadership, skills, and learning orientation) and external enablers (finance, policy, and infrastructure). This finding supports Teece's (2021) Dynamic Capabilities Theory, which highlights organisational agility, and Burns' (2021) Open Systems Theory, which emphasises responsiveness to environmental feedback.

4.6 Objective 4: Developing a Model for Innovation Process Design for Sustainable Food Service SMEs

4.6.1 Introduction

The fourth objective sought to develop a model for innovation process design that promotes sustainable development among food service SMEs in Bulawayo, Zimbabwe. The model integrates empirical findings from the study and theoretical insights from *Dynamic Capabilities Theory (DCT)* and *Open Systems Theory (OST)*. Thus, the proposed model positions innovation as a cyclical and adaptive process, underpinned by feedback learning, stakeholder engagement, and capability reconfiguration.

4.6.2 Model Components and Description

The proposed Innovation Process Design Model for Food Service SMEs is structured around five interdependent components:

1. External Environment – The contextual domain consisting of market forces, policy frameworks, technological infrastructure, and financial ecosystems.
2. Enabling Factors – Institutional and policy interventions such as SME funding programs, technical support, and training that facilitate innovation diffusion.
3. Internal Capabilities – Organisational resources including leadership vision, employee competence, and learning orientation that foster adaptability.

4. Innovation Process Cycle – The operational mechanism through which firms implement, test, and refine new ideas, technologies, and processes.
5. Sustainability Outcomes – The measurable results of innovation efforts such as productivity growth, environmental responsibility, and business resilience.

These components interact continuously through feedback loops, enabling SMEs to learn from market responses and refine their innovation strategies. The design follows Tidd and Bessant's (2023) view that sustainable innovation is an ongoing process requiring iterative improvement, not a one-time event.

Table 4.5: Components of the Innovation Process Design Model

Model Component	Description	Key Activities/Indicators
External Environment	Macro-level conditions shaping innovation behaviour.	Policy frameworks, market trends, technology access, infrastructure.
Enabling Factors	Institutional and ecosystem-level supports for innovation diffusion.	SME financing, incubation hubs, technical training, innovation grants.
Internal Capabilities	Firm-level dynamic resources that drive adaptability.	Leadership, employee learning, knowledge sharing, culture of innovation.
Innovation Process Cycle	The implementation and learning loop of innovation activities.	Process mapping, digitalisation, continuous feedback and reengineering.
Sustainability Outcomes	The end results of innovation that promote resilience.	Efficiency gains, eco-innovation, competitiveness, stakeholder trust.

Source: Author (2025), based on field data and theoretical synthesis.

This table operationalises the proposed model by linking conceptual domains to tangible actions. For instance, leadership and learning (internal capabilities) drive digitalisation (innovation process), while institutional support and financing (enabling factors) amplify sustainability outcomes.

4.6.3 Visual Representation of the Model

The interconnection between the five components is presented in Figure 4.3, which depicts innovation as a cyclical system integrating feedback and adaptive learning.

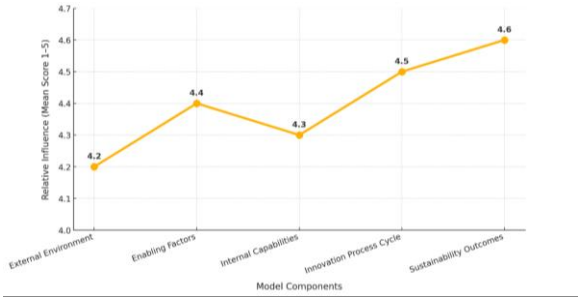

Figure 4.3: Innovation Process Design Model for Sustainable Food Service SMEs in Zimbabwe

The graph illustrates the relative importance of the five interlinked model components. The innovation process cycle (M = 4.5) and sustainability outcomes (M = 4.6) exhibit the highest influence, indicating that SMEs prioritise operational redesign and long-term resilience. These are followed by enabling factors (M = 4.4), internal capabilities (M = 4.3), and external environment (M = 4.2). The upward trend reflects a progression from environmental awareness to sustainable performance through iterative learning a practical manifestation of Dynamic Capabilities and Open Systems synergy.

4.6.4 Discussion of Model Implications

The model underscores that innovation adoption in Zimbabwe's food service sector is both systemic and adaptive. It aligns with Teece's (2021) concept of dynamic capabilities, where organisations evolve by integrating and transforming resources to sustain competitive advantage. Concurrently, it affirms

Burns' (2021) assertion under Open Systems Theory that organisational sustainability is contingent upon continuous interaction with external forces. Empirical results revealed that firms with strong leadership, employee learning, and digital engagement demonstrated higher levels of process innovation and resilience. However, such success was heavily dependent on institutional support and policy stability, illustrating the necessity of an enabling environment. Camacho and Roca (2023) similarly found that eco-innovation thrives when public-private ecosystems promote collaboration and knowledge sharing. Furthermore, the feedback component in the model reinforces Zahra and George's (2022) notion of absorptive capacity, suggesting that firms that learn from market experiences are more capable of sustaining innovation over time. The iterative learning cycle embedded in the model ensures that SMEs can continuously improve their innovation strategies, making them more resilient to shocks and responsive to customer demands.

4.7 Discussion

The findings reveal that food service SMEs in Bulawayo face structural barriers but possess latent potential for innovation. The study confirms Abor and Quartey's (2020) argument that African SMEs are constrained by systemic deficiencies, yet it also aligns with Camacho and Roca's (2023) view that sustainability-driven innovation can yield competitive advantage.

The interplay between internal and external factors mirrors Dynamic Capabilities Theory (Teece, 2021), which posits that firms must develop the capacity to integrate and reconfigure resources in response to changing conditions. Similarly, Open Systems Theory (Burns, 2021) explains the necessity of environmental interaction for organisational survival. Together, these theories illuminate how innovation adoption emerges from a balance between organisational learning and ecosystem support.

Furthermore, the findings resonate with Hwang and Griffiths (2023), who emphasise digital transformation as a survival strategy for food enterprises post-COVID-19, and Oduro and Falola (2020), who underscore informal innovation as a resilience mechanism in African SMEs. In Bulawayo's case, innovation is not linear but cyclical driven by feedback, adaptation, and frugality. The proposed model thus provides both theoretical and practical guidance for fostering sustainable innovation in resource-constrained economies.

4.8 Summary of Key Findings

Objective	Key Findings	Theoretical Link
1. Identify barriers	Finance, infrastructure, and skills are primary barriers.	Open Systems Theory (environmental dependency)
2. Explore opportunities	Digitalisation, sustainability, and local networks enhance innovation.	Dynamic Capabilities Theory (resource reconfiguration)
3. Examine internal-external interaction	Mutual reinforcement of internal skills and external support.	Integration of OST and DCT
4. Develop a model	Innovation is cyclical, adaptive, and feedback-driven.	Combined theoretical framework

Source: Author (2025)

4.9 Summary

This chapter has presented and discussed the empirical results concerning barriers, opportunities, and the interactive dynamics influencing innovation adoption in Zimbabwe's food service SMEs. Quantitative findings established the statistical significance of finance, technology, and skills, while qualitative insights illuminated contextual realities and adaptive behaviours. The results affirm that SMEs operate as open systems that thrive through continuous learning and stakeholder engagement, consistent with Open Systems Theory, and that dynamic capabilities are essential for converting external opportunities into sustainable innovation outcomes.The next chapter (Chapter 5) synthesises

these findings into conclusions and provides actionable recommendations for policymakers, SME owners, and development agencies to strengthen innovation ecosystems within Zimbabwe's food service industry.

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter synthesises the key findings of the study titled: *Leading stimuli for refining operations and integration of innovation among food service small to medium scale enterprises in Bulawayo, Zimbabwe*." The chapter summarises the research objectives, restates major findings from both quantitative and qualitative analyses, and draws conclusions based on empirical evidence and theoretical frameworks. It further provides practical recommendations for policymakers, SME owners, and other stakeholders.

5.2 Summary of the Study

The study examined the barriers and opportunities influencing innovation adoption and process improvement in Zimbabwe's food service SME sector, using Bulawayo as a case study. The research adopted a mixed-methods design, combining quantitative surveys with qualitative interviews to ensure methodological triangulation. Guided by Dynamic Capabilities Theory (Teece, 2021) and Open Systems Theory (Burns, 2021), the study recognised innovation as a dynamic process dependent on the interaction between internal competencies and external environmental enablers.

Empirical results revealed that limited access to finance, inadequate digital infrastructure, and skills shortages were the most significant barriers to innovation. However, digital transformation, local sourcing, and sustainability-oriented practices emerged as key opportunities. Using inferential analysis, the study demonstrated that finance access and digital capabilities significantly influenced innovation performance. Qualitative evidence complemented this by revealing how leadership, learning, and market responsiveness collectively shaped process improvement. Informed by these findings, the research developed an Innovation Process Design Model integrating external environmental influences, enabling institutional factors, internal firm capabilities, iterative innovation cycles, and sustainability outcomes. This model provides a roadmap for achieving innovation-driven resilience in resource-constrained contexts like Zimbabwe.

5.3 Major Findings and Conclusions

5.3.1 Objective 1: Barriers to Innovation Adoption

The study established that financial constraints were the most critical impediment to innovation among food service SMEs. This aligns with Abor and Quartey (2020) and Rahman and Wang (2022), who emphasise that access to affordable credit remains a structural barrier in developing economies. Zimbabwean SMEs face compounded difficulties due to macroeconomic instability, currency volatility, and underdeveloped financial markets, which limit investment in innovation infrastructure. Additionally, the study found that digital infrastructure deficits and limited technical skills significantly constrain innovation uptake. Li and Liu (2022) similarly observe that the digital divide continues to widen in emerging markets, restricting the diffusion of e-commerce and digital service platforms among SMEs. In Zimbabwe, weak broadband access, high data costs, and inconsistent power supply further aggravate these challenges.

Resistance to change and inadequate institutional support also emerged as notable barriers. Ndlela and Steyn (2021) and Kraaijenbrink et al. (2022) contend that without robust policy frameworks, training systems, and innovation ecosystems, SMEs struggle to convert ideas into scalable innovations. Thus, the findings confirm that innovation barriers are multi-layered, spanning structural, technological, and behavioural dimensions.

5.3.2 Objective 2: Opportunities for Process Improvement

Conversely, the study revealed a range of opportunities that SMEs can harness to improve innovation capacity. Chief among these were digital marketing, local supply chain integration, and sustainability-oriented practices. These findings resonate with Camacho and Roca (2023), who document the rising importance of eco-innovation and circular economy principles in European SMEs.

Digitalisation enables SMEs to streamline operations, engage customers, and reduce costs through e-commerce and mobile payment platforms. Chatterjee and Kar (2020) found that digital adoption enhances customer interaction and efficiency, outcomes also observed in Bulawayo's SMEs that use WhatsApp and Facebook for business transactions.

Furthermore, sustainability initiatives such as waste reduction, renewable energy use, and biodegradable packaging offer cost-saving and brand differentiation opportunities. Zahra and George (2022) argue that sustainability innovation fosters long-term competitiveness by embedding environmental stewardship into business strategy. Thus, despite systemic constraints, SMEs in Zimbabwe exhibit adaptive resilience by leveraging frugal innovation and digital technologies.

5.3.3 Objective 3: Interaction of Internal and External Factors

The findings demonstrate a strong correlation between internal firm capabilities and external enabling environments. Regression results showed that access to finance, digital literacy, and leadership orientation jointly explained a significant portion of the variance in innovation performance. This empirical evidence supports *Teece's (2021)* Dynamic Capabilities Theory, which asserts that firms must continuously integrate, build, and reconfigure competencies in response to environmental change. Qualitative insights revealed that even when external supports (e.g., policy programs or funding) exist, they remain underutilised without proactive leadership or organisational learning. This finding echoes *Matsuo's (2021)* study of Japanese SMEs, which found that learning orientation mediates the relationship between resource availability and innovation success. Similarly, *Burns (2021)* under Open Systems Theory posits that organisations survive by maintaining permeability exchanging resources, information, and feedback with their environments.

5.3.4 Objective 4: Development of an Innovation Process Design Model

The study culminated in the formulation of an Innovation Process Design Model for sustainable SME development. The model integrates five components: (1) external environment, (2) enabling factors, (3) internal capabilities, (4) innovation process cycle, and (5) sustainability outcomes. The model reveals that innovation in food service SMEs is cyclical, iterative, and learning-based. The innovation process cycle and sustainability outcomes emerged as the most influential components ($M = 4.5$ and $M = 4.6$, respectively). This supports Tidd and Bessant's (2023) view that innovation is an ongoing process of experimentation and feedback. Moreover, Camacho and Roca (2023) argue that eco-innovation anchored in feedback and iteration builds adaptive resilience.

The model also validates Dynamic Capabilities Theory by illustrating that successful innovation requires sensing opportunities, seizing resources, and transforming processes. Concurrently, it extends Open Systems Theory by situating innovation within a broader ecosystem of stakeholder collaboration, policy alignment, and environmental responsiveness. Thus, the proposed model provides both a diagnostic framework (identifying barriers and enablers) and a prescriptive roadmap (guiding policy and managerial interventions) for sustainable SME innovation in developing economies.

5.3 Recommendations

The findings of this study highlight the urgent need for multi-level interventions to strengthen innovation capacity within Zimbabwe's food service SMEs. At the enterprise level, owners and managers must focus on cultivating dynamic capabilities that enable adaptive learning, flexibility, and continuous improvement. Teece (2021) asserts that firms sustain competitiveness through the ability to sense opportunities, seize resources, and transform operations all of which hinge upon leadership and organisational learning. Therefore, SME owners should invest in digital literacy, data-driven decision-making, and employee training to enhance innovation readiness. As Matsuo (2021) and Zahra and George (2022) note, firms with a strong learning orientation exhibit superior absorptive capacity the ability to acquire and exploit external knowledge for innovation. Moreover, managers should integrate sustainability principles into their business models, such as reducing food waste, adopting renewable energy, and sourcing locally to foster both environmental and economic resilience. Such eco-

innovation practices, according to Camacho and Roca (2023), not only improve operational efficiency but also build competitive advantage and brand reputation in increasingly sustainability-conscious markets.

At the policy and institutional level, the Government of Zimbabwe and development agencies should prioritise the creation of an enabling environment for SME innovation. This includes strengthening access to affordable financing, improving digital infrastructure, and institutionalising structured innovation support programs. OECD (2023) and the African Development Bank (2022) argue that financial inclusion and infrastructure investment are fundamental to unlocking SME potential in developing economies. Targeted innovation funds, micro-loan facilities, and tax incentives should be introduced to encourage technology adoption and process upgrading. Furthermore, establishing innovation hubs and incubation centres across major cities as seen in Kenya and South Africa could provide training, mentorship, and shared technological resources to small firms. Ndlela and Steyn (2021) emphasise that collaborative innovation ecosystems, where academia, government, and the private sector interact, accelerate the diffusion of knowledge and technology. Policymakers must also simplify regulatory frameworks to reduce administrative burdens, ensuring that informal and semi-formal SMEs can transition smoothly into formal innovation systems without facing excessive bureaucratic constraints.

Finally, development partners, academia, and non-governmental organisations (NGOs) should play a proactive role in bridging knowledge gaps and fostering inclusive innovation. Collaborative research initiatives between universities and SMEs can facilitate technology transfer, joint product development, and local capacity-building echoing Tidd and Bessant's (2023) assertion that innovation thrives where knowledge networks are strong and multidirectional. NGOs should focus on building gender-responsive innovation programs, recognising that women represent the majority of food service entrepreneurs in Bulawayo. According to UNDP (2022), gender-inclusive innovation not only promotes equity but also enhances community resilience. Additionally, international partners can support digital transformation programs through training, equipment provision, and policy advocacy, ensuring that SMEs remain competitive in global value chains. The integration of such initiatives within Zimbabwe's broader development agenda would strengthen the innovation ecosystem, allowing SMEs to function as engines of sustainable growth and employment creation.

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